

# Subject Index to Volume 2

- activation moments, determination 2 (1981) 189
- ADA (comparison of languages) 2 (1981) 123
- Adaptable Programmable Assembly System (APAS) 2 (1981) 200, 205, 206
- adaptive control 2 (1981) 59, 199
- administrative activities 2 (1981) 76
- algorithms,
  - adaptive control 2 (1981) 67
  - conversion of 3-View drawing to 3-D representation 2 (1981) 133
  - dynamic scheduling 2 (1981) 189
  - optimization 2 (1981) 189
- analog computer development, history 2 (1981) 45
- APAS 2 (1981) 200, 205, 206
- Applications 2 (1981) 1, 13, 23, 31, 97, 105, 109, 115, 141, 171, 179, 189
- artificial intelligence, geometric modelling 2 (1981) 133
- assembly automation 2 (1981) 318
- automation levels 2 (1981) 297
- balance computations 2 (1981) 179
- biomass estimates 2 (1981) 115
- biotechnology 2 (1981) 115
- Book Reviews 2 (1981) 83, 149
- Brown Boveri 2 (1981) 171
- CAD 2 (1981) 23, 31, 41, 59, 97, 133, 209, 225
- CAD requirements 2 (1981) 31
- CADSYS 2 (1981) 97
- CAG 2 (1981) 23
- CAM 2 (1981) 23, 41, 225, 241
- Carnegie-Mellon University 2 (1981) 200
- CATI 2 (1981) 89
- catastrophe phase 2 (1981) 13
- CERN 2 (1981) 105
- chemical industrial process 2 (1981) 179, 189
- chemical reactor, control 2 (1981) 189
- chemical systems engineering 2 (1981) 41, 179, 189
- choice, of measurement parameters 2 (1981) 179
- clerical activities 2 (1981) 76
- cognitive tasks 2 (1981) 133
- comparison of real-time languages 2 (1981) 123
- compiler validation 2 (1981) 109
- compliance (robotics) 2 (1981) 199

- computer aided design (CAD) 2 (1981) 23, 31, 41, 59
- computer aided drafting 2 (1981) 31
- computer aided draughting system 2 (1981) 31
- computer aided graphics (CAG) 2 (1981) 23
- computer aided manufacturing (CAM) 2 (1981) 23, 41
- computer aided technical invention (CATI) 2 (1981) 89
- computer control 2 (1981) 1, 189
- computer/engineer partnership 2 (1981) 41
- computer graphics 2 (1981) 23
- computer suggested creativity (CSC) 2 (1981) 89
- computer vision 2 (1981) 199
- computerization,
  - case studies 2 (1981) 267
  - design criteria 2 (1981) 297
  - employment 2 (1981) 259
  - stages of 2 (1981) 287
  - working environment 2 (1981) 275
- configuration, sensor 2 (1981) 115
- Consight 2 (1981) 201
- consortia 2 (1981) 49
- control 2 (1981) 76
- control system,
  - PRIMO 2 (1981) 171
  - SPS 2 (1981) 105
- CORAL,
  - comparison with other languages 2 (1981) 123
  - PRIMO 2 (1981) 171
- cost assessment 2 (1981) 23
- cost calculating 2 (1981) 23
- creative human process 2 (1981) 133, 209
- creativity 2 (1981) 133, 209
- CSC 2 (1981) 89,
- data base, distributed 2 (1981) 105
- data base management 2 (1981) 97, 171
- data elements, PRIMO data base system 2 (1981) 174
- data language, TASKMASTER 2 (1981) 97
- data manipulation programs, stand-alone 2 (1981) 97
- data modules 2 (1981) 106
- DBMS 2 (1981) 97, 171
- DEC 2 (1981) 4, 171, 200
- decentralization 2 (1981) 76
- decision-making 2 (1981) 189
- decomposing equation system 2 (1981) 179
- design, engineering 2 (1981) 97
- design criteria 2 (1981) 297
- design software 2 (1981) 49
- digital computer development, history 2 (1981) 44
- Digital Equipment 2 (1981) 4, 171
- display terminals 2 (1981) 73
- distributed data base 2 (1981) 105

- documentation, technical 2 (1981) 31, 50  
drafting 2 (1981) 31  
  
economic growth 2 (1981) 259  
economic stagnation 2 (1981) 76  
efficiency 2 (1981) 23  
employees 2 (1981) 73  
employment 2 (1981) 259  
end users 2 (1981) 73  
engineering design 2 (1981) 97  
ergonomic factors 2 (1981) 73  
ergonomy 2 (1981) 73  
ESL 2 (1981) 123  
estimates, biomass 2 (1981) 115  
EWICS 2 (1981) 85, 105, 123  
eye-strain 2 (1981) 73  
  
fault detection 2 (1981) 70  
female values 2 (1981) 209  
fermentation process 2 (1981) 115  
flexible fixtures (robotics) 2 (1981) 199  
force sensors (robotics) 2 (1981) 199  
FORTRAN 2 (1981) 46, 123, 171  
Forum 2 (1981) 73, 76, 209  
  
General Motors, Consight 2 (1981) 201  
general preprocessor 2 (1981) 97  
geometric modelling, artificial intelligence 2 (1981) 133  
grippers 2 (1981) 199  
guided vehicle systems, automated 2 (1981) 312  
  
hierarchy numerical control 2 (1981) 13  
high level languages 2 (1981) 233  
human environment 2 (1981) 297  
human factors 2 (1981) 73  
human-machine  
    interface 2 (1981) 225  
    systems 2 (1981) 297  
human system component 2 (1981) 297  
human system design criteria 2 (1981) 225, 297  
human/technology relationship 2 (1981) 73, 76, 83  
humanization of work 2 (1981) 259  
humanization computer systems 2 (1981) 275, 297  
  
IBM 2 (1981) 43  
ICAM 2 (1981) 200  
identification 2 (1981) 59  
IIS 2 (1981) 13  
industrial engineering conference 2 (1981) 320  
industrial work 2 (1981) 76  
informatics, social oriented 2 (1981) 297

- information production 2 (1981) 259
- "information society" 2 (1981) 76
- Integrated Computer-Aided Manufacturing (ICAM) 2 (1981) 200
- integrated industrial system 2 (1981) 13
- interactive networking 2 (1981) 105
  
- job content 2 (1981) 73, 209, 275, 267
- job degradation 2 (1981) 259
- job satisfaction 2 (1981) 287
  
- laser range finding 2 (1981) 199
- law of progress 2 (1981) 287
- leisure time 2 (1981) 209
- lighting 2 (1981) 73
- light stripping 2 (1981) 199
  
- machine tool workload 2 (1981) 241
- man-machine interface 2 (1981) 225, 297
- managerial control 2 (1981) 209
- manipulators (robotics) 2 (1981) 199
- material balance 2 (1981) 179
- mathematical process models 2 (1981) 59
- measurement,
  - choice of parameters 2 (1981) 179
  - online biological 2 (1981) 115
- Methodology for Unmanned Manufacture (MUM) 2 (1981) 200
- micro computer 2 (1981) 1
- microprocessors 2 (1981) 233
- modelling, artificial intelligence geometric 2 (1981) 133
- monitoring 2 (1981) 59
- Monsanto company history 2 (1981) 41
- Monsanto's T-manual 2 (1981) 50
- multi-computer program 2 (1981) 105
- multi-layer structures 2 (1981) 189
- MUM 2 (1981) 200
  
- net-effect sensor 2 (1981) 115
- networking, interactive 2 (1981) 105
- News from TC 5 2 (1981) 87, 151, 217, 323
- NODAL 2 (1981) 105
  
- online biological monitoring 2 (1981) 115
- online optimization 2 (1981) 62
- operator facilities and education 2 (1981) 287
- optimization 2 (1981) 59, 189
- organization requirements 2 (1981) 31
- oxygen uptake rate 2 (1981) 115
  
- parallel programming 2 (1981) 1
- parameter estimation 2 (1981) 59
- PASCAL, comparison with other languages 2 (1981) 109, 123
- pattern recognition 2 (1981) 133



- pcb 2 (1981) 249
- pcb plating process 2 (1981) 249
- PDP-11 2 (1981) 171
- PEARL
  - case study 2 (1981) 1
  - comparison with other languages 2 (1981) 123
- plating process, SCOL 2 (1981) 249
- polarization of qualifications 2 (1981) 76
- portability, software 2 (1981) 109
- portable software 2 (1981) 109
- preprocessor, general 2 (1981) 97
- PRIMO data base management system 2 (1981) 171
- printed circuit boards 2 (1981) 249
- problem formulation 2 (1981) 179
- process automation 2 (1981) 1
- process computer 2 (1981) 1
- process computer control 2 (1981) 59
- process control 2 (1981) 41, 59, 171, 233
- process control languages 2 (1981) 233
- process control systems 2 (1981) 233
- process industry application areas, history 2 (1981) 47
- process monitoring 2 (1981) 41, 70, 115
- processes, fermentation 2 (1981) 115
- production control 2 (1981) 241
- productivity 2 (1981) 23
- professional compatibility 2 (1981) 287
- program,
  - multi-computer 2 (1981) 105
  - stand-alone data manipulation 2 (1981) 97
- programming languages,
  - comparison of ADA, CORAL, PASCAL and PEARL 2 (1981) 123
  - PEARL 2 (1981) 1, 123
  - realtime 2 (1981) 1, 123
  - SCOL 2 (1981) 233
- PUMA robot 2 (1981) 200
- quality of work 2 (1981) 267, 297
- RAA 2 (1981) 204
- rationalization 2 (1981) 76
- RCC 2 (1981) 203
- real-time,
  - PRIMO data base management system 2 (1981) 171
  - programming languages 2 (1981) 1, 123
- reliability structure 2 (1981) 13
- remote axis admittance (RAA) 2 (1981) 204
- remote center of compliance (RCC) 2 (1981) 203
- robotics, State-of-the-Art 2 (1981) 13, 219, 199
- scene analysis 2 (1981) 133
- scheduling algorithms, dynamic 2 (1981) 189

- sensor, net-effect 2 (1981) 115
- sensor configuration 2 (1981) 115
- sensors,
  - force 2 (1981) 199
  - net-effect 2 (1981) 115
  - tactile 2 (1981) 199
- sequence optimization 2 (1981) 241
- simulation, of catastrophe 2 (1981) 16
- social effects 2 (1981) 76, 209, 267, 275
- social innovation 2 (1981) 287
- social production systems 2 (1981) 275
- socially useful goods 2 (1981) 76
- soft degradation 2 (1981) 13
- software portability 2 (1981) 109
- SOTAC '79 2 (1981) 253, 254, 259, 267, 275, 287, 297
- SPS control system 2 (1981) 105
- SRI 2 (1981) 200
- standardization 2 (1981) 1
- State-of-the-Art 2 (1981) 41, 59, 123, 199
- stress 2 (1981) 73, 297
- structure transformation 2 (1981) 13
- Sulphuric Acid Plant (application) 2 (1981) 186
- suppression 2 (1981) 209
- system, SPS control 2 (1981) 105
- system engineering requirements and aims 2 (1981) 43
- system specification 2 (1981) 31
- tactile sensors 2 (1981) 199
- TASKMASTER 2 (1981) 97
- TC-9 2 (1981) 73
- technical documentation 2 (1981) 50, 171
- technological change 2 (1981) 209
- testing & test and measurement, automatic 2 (1981) 314
- testing problem formulation 2 (1981) 179
- tool failure rates 2 (1981) 141
- tool life 2 (1981) 141
- tool utilization planning 2 (1981) 241
- trade unions 2 (1981) 73, 209
- tutorial 2 (1981) 133
- unemployment 2 (1981) 76, 209, 259
- Unimation Company 2 (1981) 200
- unions 2 (1981) 73
- Uptake rate, oxygen 2 (1981) 115
- U.S. Air Force 2 (1981) 200
- user-friendly interactive networking 2 (1981) 105
- validation, compiler 2 (1981) 105
- validation office 2 (1981) 105
- values, female 2 (1981) 209

VDU	2 (1981) 73
view interpretation	2 (1981) 133
visual display units (VDUs)	2 (1981) 73
Westinghouse Electric Corp.	2 (1981) 200
white-collar work	2 (1981) 76, 209
work, conditions of	2 (1981) 73, 209, 275
work content	2 (1981) 73, 209
work, control of	2 (1981) 275
work environment	2 (1981) 73, 209
work organization	2 (1981) 267
work stations	2 (1981) 73
3-D representation	2 (1981) 133
3-View drawing conversion	2 (1981) 133

## Author Index to Volume 2

Altaber, J., et al., The Distributed Data-Base for the CERN SPS Control System	2 (1981) 105
Barkai, J., et al., SCOL - A High-Level Structured Language for Process Control	2 (1981) 233
Beck, F., see Altaber, J.	2 (1981) 105
Briefs, U., Re-Thinking Industrial Work: Computer Effects on Technical White-Collar Workers	2 (1981) 76
Briefs, U., Computerization and Unemployment	2 (1981) 259
Cooley, M.J., Some Social Aspects of CAD	2 (1981) 209
Fatheldin, M., et al., Considerations in the Outline Specification of an Effective Computer Aided Draughting System	2 (1981) 31
Frühauf, K., see Koller, H.	2 (1981) 171
Fuchs-Kittowski, K., et al., Working Environment	2 (1981) 275
Gien, M., A PASCAL Validation Office	2 (1981) 109
Gościński, A., et al., An Online Activation Moments Determination for Steady-State Optimization	2 (1981) 189
Holzer, A.J., Some Critical Areas in Robotics Research	2 (1981) 199
Huhn, R.M., Conference Report on the 14th Annual Simulation Symposium	2 (1981) 224
Isermann, R., Advanced Methods of Process Computer Control for Industrial Processes	2 (1981) 59
Iyer, K.S.S., et al., Tool Life with Speed and Time Dependent Failure	2 (1981) 141
Kalman, R.E., Report on the IFIP Committee on Informatics for Development (ICID) on Regional Consultations in South-East Asia	2 (1981) 155
Kaufman, D.J., see Rosen, E.M.	2 (1981) 41
Koller, H., et al., A Data Base Management System for Industrial Process Control	2 (1981) 171
Kuo, C., Workshop on the Use of Computers in Offshore Operations	2 (1981) 224

- Leonard, R., see Fatheldin, M. 2 (1981) 31
- Lount, A.M., et al., Stand-Alone Data Manipulation Programs 2 (1981) 97
- Malagardis, N.E., 7th Spring Meeting of the European Workshop on Industrial Computer Systems (EWICS) 2 (1981) 85
- Margulies, F., Trade Union Aspects and Experiences with Work on VDUs 2 (1981) 73
- Martin, T., PEARL at the Age of Five 2 (1981) 1
- Nemes, L., see Tamas, P. 2 (1981) 287
- Parslow, R.D., 1981 British Computer Society Conference 2 (1981) 311
- Preiss, K., Algorithms for Automatic Conversion of a 3-View Drawing of a Plane-Faced Part to the 3-D Representation 2 (1981) 133
- Rasmussen, J., Human Systems Design Criteria 2 (1981) 297
- Rathmill, K., see Fatheldin, M. 2 (1981) 31
- Rolloy, G., Seven Case Studies on Computerization 2 (1981) 267
- Rooks, B.W., Paving the Way for Robots That See and Feel 2 (1981) 219
- Rosen, E.M., et al., Computers, Design and Monsanto 2 (1981) 41
- Rudolf, K., et al., The Sequence Dependent Problem of Production Control 2 (1981) 241
- Sandmayr, H., A Comparison of Languages: CORAL, PASCAL, PEARL, ADA and ESL 2 (1981) 123
- Sata, T., Man-Machine Communication in CAD/CAM 2 (1981) 225
- Schuster, I., see Fuchs-Kittowski, K. 2 (1981) 275
- Scott, D.J., Computer Aided Graphics: Determining System Size, Estimating Costs and Savings 2 (1981) 23
- Shafir, S., see Barkai, J. 2 (1981) 233
- Smyth, W.F., see Lount, A.M. 2 (1981) 97
- Spriet, J.A., Online Monitoring of Fermentation Processes 2 (1981) 115
- Stanek, W., see Rudolf, K. 2 (1981) 241
- Sveistrup, P., Introduction by the Conference Editor 2 (1981) 254
- Szentgyorgyi, Z., see Tamas, P. 2 (1981) 287
- Szumański, Z., Modelling the Behaviour of an Integrated Industrial System During a Catastrophe 2 (1981) 13
- Tamas, P., et al., Computer Operation 2 (1981) 287
- Tibaldi, M., Plating Process Automation Control in the PCB Industry 2 (1981) 249
- Ukhidave, V.H., see Iyer, K.S.S. 2 (1981) 141
- Václavek, V., et al., Choice of Measured Parameters and Testing Correctness of Problem Formulation in Balancing Industrial Chemical Processes 2 (1981) 179
- Vlietstra, J., Review of Architect or Bee? The Human/Technology Relationship, by M. Cooley 2 (1981) 83
- Vlietstra, J., Review of Computer Aided Design and Manufacture, by C.B. Besant 2 (1981) 149
- Vosolsobe, J., see Václavek, V. 2 (1981) 179
- Warman, E.A., Review of Identification of Industrial Processes, by N.S. Rajbman and V.M. Chadeev 2 (1981) 149
- Warman, E.A., Man-Machine Communication in CAD/CAM 2 (1981) 225
- Wenzlaff, B., see Fuchs-Kittowski, K. 2 (1981) 275
- Zieliński, K., see Gościński, A. 2 (1981) 189